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EXAMINER	
LISTVOYB, GREGORY	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PHILIPPE BUSSON, RONNIE PALMGREN, and MICHAEL MORRISON

Appeal 2009-003489
Application 10/517,226
Technology Center 1700

Decided: October 20, 2009

Before EDWARD C. KIMLIN, PETER F. KRATZ, and
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

ROBERTSON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-19. (Appeal Brief filed April 10, 2008, hereinafter "App. Br.," 3). We have jurisdiction pursuant to 35 U.S.C. § 6(b).

We REVERSE.

THE INVENTION

Appellants describe a method of producing a cross-linked polymeric support having a multimodal pore structure. Claim 1, reproduced below, is representative of the subject matter on appeal.

> 1. A method of producing a cross-linked polymeric support having a multimodal pore structure, comprising the steps of:
>
> (a) providing a degradable initiator molecule;
>
> (b) providing an organic phase, which comprises said initiator molecule, one or more radically polymerisable monomers and a porogen in a solvent, and an aqueous phase, which comprises a transition metal catalyst;
>
> (c) forming a suspension of the organic phase and the aqueous phase;
>
> (d) starting a suspension polymerisation of the organic phase in the aqueous phase by adding a ligand, which co-ordinates to the transition metal in the aqueous phase via at least one atom, to produce a cross-linked polymeric support having a primary pore structure and comprising initiator molecule; and
>
> (e) subjecting the support obtained from step (d) to degrading conditions to at least partially remove the initiator molecule from within the support to produce a cross-linked polymeric support having a secondary pore structure in addition to the primary pore structure.

THE REJECTION

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Li	US 5,288,763	Feb. 22, 1994
Matyjaszewski	US 5,763,548	Jun. 9, 1998

Fujimori et al. "Effect of Viscosity in the Radical Polymerization of Acrylic Acid in the Presence of Poly(4-Vinylpyridine) in Methanol" Polymer Bulletin, 9, 204-207 (1983).

The Examiner rejected claims 1-19 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Matyjaszewski, as evidenced by Fujimori.

ISSUE

Have Appellants shown that the Examiner reversibly erred in determining that Li as evidenced by Fujimori discloses the degradable initiator recited in the method of claim 1?

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. The Examiner found that Li discloses a method of producing a cross-linked polymeric support having a multimodal pore structure including providing a degradable template macromolecule such as poly(4-vinylpyridine), corresponding to Appellants' degradable

initiator. (Examiner's Answer entered June 20, 2008, hereinafter "Ans.," 3-4).

2. Appellants' Specification defines "initiator molecule" as "an organic compound that comprises at least one site from which a radical polymerisation can be initiated." (Spec. 5, ll. 10-12).

3. Fujimori discloses: "[t]he initial rate of radical polymerization of acrylic acid (AA) in the presence of poly(4-vinylpyridine) (P4VP) in methanol solution is considered in relation to the viscosity of the system." (P. 204).

PRINCIPLES OF LAW

"'[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007), quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

ANALYSIS

Appellants contend that Li does not support the Examiner's position that the P4VP template molecule initiates polymerization. (App. Br. 3-4). Appellants argue that Fujimori, relied on by the Examiner as evidence that P4VP template molecule initiates polymerization, only shows an increase during propagation and termination, and not during initiation. (App. Br. 4-5).

We agree with Appellants that Fujimori only provides evidence that the initial rate of polymerization, as opposed to initiation of polymerization,

is increased by the presence of P4VP. (FF 3). Thus, Fujimori does not provide sufficient rational underpinning to support the Examiner's determination that the polymerization is initiated by P4VP. The Examiner has not directed us to any other sufficient rationale to remedy this deficiency. Accordingly, the Examiner has failed to provide a reasonable basis to conclude that P4VP could function as the "degradable initiator molecule" required in claim 1.

CONCLUSION

Appellants have demonstrated that the Examiner reversibly erred in determining that Li as evidenced by Fujimori discloses the degradable initiator recited in the method of claim 1.

ORDER

We reverse the Examiner's decision rejecting claims 1-19 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Matyjaszewski, as evidenced by Fujimori.

REVERSED

tc
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